IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method of motion-compensated interpolation of a data-signal, ~~which~~ said data-signal ~~comprises~~ comprising successive images wherein each image comprises groups of pixels, the method comprising the steps of:

generating ~~(18)~~ motion vectors, each motion vector corresponding to a group of pixels of one image, between a group of pixels of said one image and a second group of pixels of another image in the data-signal;

generating ~~(16)~~ interpolated results as a function of these motion vectors;

estimating ~~(20)~~ the reliability of each motion vector corresponding to a particular group of pixels;

calculating ~~(20)~~ weights as a function of the reliability of the motion vectors; and

generating ~~(20)~~ an interpolated luminous intensity of a group of pixels for an interpolated image by calculating, on the basis of these weights, a weighted average of the interpolated results.

2. (Currently Amended) ~~A method according to claim 1~~A method of motion-compensated interpolation of a data-signal, said data-

signal comprising successive images wherein each image comprises groups of pixels, the method comprising the steps of:

generating motion vectors, each motion vector corresponding to a group of pixels of one image, between a group of pixels of said one image and a second group of pixels of another image in the data-signal;

generating interpolated results as a function of these motion vectors;

estimating the reliability of each motion vector corresponding to a particular group of pixels;

calculating weights as a function of the reliability of the motion vectors; and

generating an interpolated luminous intensity of a group of pixels for an interpolated image by calculating, on the basis of these weights, a weighted average of the interpolated results, wherein the interpolated luminous intensity of a group of pixels is calculated according to:

$$I^{k+\Delta}(\bar{x}) = \left(\sum_{m=1,\ldots,M} \{w^{k}_{m}(\bar{x}) * i^{k+\Delta}_{m}(\bar{x})\}\right) / \sum_{m=1,\ldots,M} \{w^{k}_{m}(\bar{x})\}, \quad \textbf{(A)}$$

wherein $I^{k+\Delta}(\bar{x})$ is the interpolated luminous intensity of the group of pixels of an interpolated image $F^{k+\Delta}$, wherein the location of the group of pixels in the image is defined by the integer two-

dimensional vector $\vec{x}$ and where the real value Δ defines the place of the interpolated image $F^{k+\Delta}$ in the image sequence F^n, $n=1,2,\ldots,k,k+1,\ldots,N$, wherein $\Sigma_{m=1,..,M}\{.\}$ is a summation from 1 to M over its argument $\{.\}$ and where $w^k{}_m(\vec{x})$ is a weight corresponding to the m^{th} interpolation result $i^{k+\Delta}{}_m(\vec{x})$:

$$i^{k+\Delta}{}_m(\vec{x}) = median\{ (I^k(round\{\vec{x} - \Delta * \vec{D}^k_m(\vec{x})\}),\ (I^k(\vec{x}) + I^{k+1}(\vec{x}))/2),\ (I^{k+1}(round\{\vec{x} + (1-\Delta) * \vec{D}^k_m(\vec{x})\})\}, \qquad \text{(B)}$$

wherein median{.} is a function which gives the median value of its input arguments and round{.} is a function which gives the nearest integer value to each component of its input argument, and wherein $I^k(\vec{x})$ is a luminous intensity of the group of pixels at location $\vec{x}$ of the image F^k and wherein $\vec{D}^k_m(\vec{x})$ is the m^{th} two-dimensional integer motion vector, which is ~~normalised~~ normalized between two successive images, of the M motion vectors which correspond to the group of pixels at location $\vec{x}$ and wherein the weight $w^k{}_m(\vec{x})$ is a function of the reliability of the motion vector $\vec{D}^k_m(\vec{x})$.

3. (Currently Amended) ~~A~~ The method ~~according to~~ as claimed in claim 2, wherein the reliability of the motion vector $\vec{D}^k_m(\vec{x})$ is a

function of the difference between the luminous intensities $I^k(\bar{x})$ and $I^{k+1}(\bar{x}+\vec{D}_m^k(\bar{x}))$ and wherein the reliability is also a function of the relative frequency of occurrence of $\vec{D}_m^k(\bar{x})$ in the neighborhood of the location $\bar{x}$ in the image F^k.

4. (Currently Amended) ~~A~~ The method ~~according to~~as claimed in claim 1, wherein the generation of interpolated luminous intensities ~~according to the invention~~ is only performed in those parts of the images of the data-signal where edges in the motion vector field of the images are located.

5. (Currently Amended) ~~A method according to claim 4~~A method of motion-compensated interpolation of a data-signal, said data-signal comprising successive images wherein each image comprises groups of pixels, the method comprising the steps of:

generating motion vectors, each motion vector corresponding to a group of pixels of one image, between a group of pixels of said one image and a second group of pixels of another image in the data-signal;

generating interpolated results as a function of these motion vectors;

estimating the reliability of each motion vector corresponding to a particular group of pixels;

calculating weights as a function of the reliability of the motion vectors; and

generating an interpolated luminous intensity of a group of pixels for an interpolated image by calculating, on the basis of these weights, a weighted average of the interpolated results, wherein the generation of interpolated luminous intensities is only performed in those parts of the images of the data-signal where edges in the motion vector field of the images are located, and wherein the method comprises a step of edge detection, wherein an edge in the motion vector field of image F^k is detected if at least one of the inequalities (C1) and (C2) is satisfied:

$$\|[\vec{D}_q^k(\vec{x}-\vec{K})]_1 - [\vec{D}_q^k(\vec{x}+\vec{K})]_1\| > T, \qquad \textbf{(C1)}$$

$$\|[\vec{D}_q^k(\vec{x}-\vec{K})]_2 - [\vec{D}_q^k(\vec{x}+\vec{K})]_2\| > T, \qquad \textbf{(C2)}$$

where q is a pre-determined integer value and wherein $\|.\|$ is a function which yields the absolute value of its input argument, $[.]_p$ is a function which yields the p^{th} component of its vector input argument, where T is a pre-determined fixed real value threshold and wherein $\vec{K}$ is a vector which is given with:

$$\vec{K} = (K_1;K_2)^T, \qquad \textbf{(D)}$$

where K_1 and ~~K_1~~ K_2 are integer values.

6. (Currently Amended) A device for motion-compensated interpolation of a data-signal, ~~which~~ said data-signal ~~comprises~~ comprising successive images wherein each image comprises groups of pixels, the device comprising:

means ~~(18)~~ for generating motion vectors, each motion vector corresponding to a group of pixels of one image, between a group of pixels of said one image and a second group of pixels of another image in the data-signal;

means ~~(16)~~ for generating interpolated results as a function of these motion vectors;

means ~~(20)~~ for estimating the reliability of each motion vector corresponding to a particular group of pixels;

means ~~(20)~~ for calculating weights as a function of the reliability of the motion vectors; and

means ~~(20)~~ for generating interpolated luminous intensities of groups of pixels by calculating, on the basis of these weights, weighted averages of the interpolated results.

7. (Currently Amended) A picture signal display apparatus, comprising:

means ~~(12)~~ for receiving a data-signal, which data-signal comprises successive images wherein each image comprises groups of pixels;

a device ~~(10)~~ for motion-compensated interpolation of said data-signal, as claimed in claim 6;

means for generating at least one interpolated image on the basis of said interpolated luminous intensities; and

means ~~(D)~~ for displaying the at least one interpolated image.